

REMARKS

Reconsideration of the allowability of the present application in view of the above amendments and the following remarks is requested respectfully.

Status of the Claims

Claims 1 to 7 have been canceled without prejudice and reinstated as Claims 27 to 32. Claims 8 to 11, 13 to 17, and 20 to 22 have been amended. Claims 33 to 36 have been added. The claims presently pending are Claims 8 to 36. Previously withdrawn Claims 3 and 7 (now Claims 28 and 32) were rejoined by the Examiner in the December 23, 2004 Action.

Discussion of the Amendment

The claims have been amended to more particularly define the “molecule to be transported” as being one which is capable of being transported across a biological membrane.

The claims and the descriptive portion of the application have been amended with respect to the term “alkyl” which appears in  $R^1$  and  $R^2$  of formula I. The original descriptive portion and the claims state that  $R^1$  and  $R^2$  may be an alkyl radical with double and/or triple bonds. An “alkyl” radical is, however, a saturated hydrocarbon radical, that is,  $C_nH_{2n+1}$ . Accordingly, the definitions for  $R^1$  and  $R^2$  have been amended to state that they are hydrocarbon radicals which may be saturated or unsaturated.

Claims 11, 16, 17, and 22 have been amended to more particularly define applicants’ invention. Applicants have invented a novel conjugate, methods of using such a conjugate and methods for making the same. The method claims,

prior to amendment, included extraneous steps related to the preparation of the components of the conjugate. They have been amended to focus on the specific step of using the conjugate (in Claims 11, 16, and 17) or on specific step of making the conjugate itself (in Claim 22).

Claims 2 to 7 have been cancelled and reinstated as Claims 27 to 32. This was done to place such claims after Claim 8 because Claims 2 to 7 had previously been amended to depend, ultimately, therefrom. Support for Claims 27 to 32 is found in now cancelled Claims 2 to 7.

Formula (F4) of Claim 9 has been amended to include an oxygen which was inadvertently omitted from the version of the claims submitted with the Reply, filed October 18, 2004. Support is found in the claims as filed originally.

Claims 33 to 36 have been added to more particularly define applicants' invention.

In various claims, it was clarified that the molecule (as defined therein) comprises a polynucleotide, oligonucleotide, or mononucleotide (e.g., it may include also a reactive group).

In addition, various amendments of an editorial nature have been made.

No new matter has been added.

#### Discussion of the Examiner's Section 102(b) Rejection

The Examiner has rejected Claims 6, 8, 24, and 26 under Section 102(b) as being anticipated by the disclosure of Chen et al., *Macromolecules*, 23: 5044-5058 (1990). (The subject matter of Claim 6 is now presented in Claim 31.) This rejection is traversed respectfully.

In support of his rejection, the Examiner has cited specifically compound (i) of Table I of Chen et al. as being a conjugate of applicants' claimed invention. The structure of this compound includes: (A)  $R^1$  which is defined as  $-(CH_2)_5-O-C(O)-C(CH_3)=CH_2-$ ; (B) X and Y which are defined as O; (C) a phenyl group; and (D)  $R^3$  which is defined as a carbonyl group. According to the Examiner, the remainder of compound (i) is a molecule to be transported, the Examiner has stated that the Section 102 rejection is based on "a broad but reasonable interpretation of the claim in which the group to be transported is considered to be transported to the polymer in the process of polymer formation".

Applicants submit respectfully that the Examiner's position is in error. Applicants' claims define  $R^1$  as being a substituted or unsubstituted hydrocarbon radical. As such they distinguish over the  $R^1$  group of compound (i), that is,  $-(CH_2)_5-O-C(O)-C(CH_3)=CH_2-$ , which includes oxygen-containing ester functionality. Accordingly, compound (i) of the reference comprises a backbone which contains not only hydrogen and carbon, but also oxygen, in contrast to the carbon/hydrogen "only" backbone of applicants' claimed conjugate.

In addition, the amended claims now define a conjugate comprising a molecule for which is capable of being transported across a biological membrane.

Chen et al. does not disclose such a molecule. As such, Chen et al. does not anticipate the claims as amended.

Given the above, applicants submit respectfully that the Examiner's §102 rejection should be withdrawn.

Discussion of the Examiner's Section 112, First Paragraph, Rejection

The Examiner rejected Claims 2, 6, 8, 9, 11 to 14, 16 to 21, and 24 to 26 under the written description requirement of Section 112, first paragraph (the subject matter of Claims 2 and 6 are now presented in Claim 27 and 31, respectively).

According to the Examiner, the application does not provide support for conjugates comprising all "molecules for transport", which the Examiner considers may be interpreted as being any molecule which is capable of being transported anywhere. The Examiner advised that the rejection may be overcome by defining the range of molecules as those capable of being transported across a biological membrane. This has been done by virtue of amendments presented herein.

Given the above, applicants submit respectfully that the Examiner's §112 rejection has been overcome and request that it be withdrawn.

Discussion of the Examiner's Objection to the Claims


The Examiner's objection to Claim 3 because of the use of the plural term "polynucleotides" has been overcome by the replacement of Claim 3 with Claim 28 which includes the term "polynucleotides".

The Examiner's objection to Claim 9 because of the omission of an oxygen has been overcome by the appropriate amendment.

Conclusion

In view of the foregoing, applicants request respectfully that the Examiner withdraw his rejections and objections to the claims and issue an early and favorable Action.

Submitted respectfully,  
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